

REMARKS

Reconsideration of this application, as amended, is requested.

Claims 1, 3, 4 and 7-10 remain in the application. Claims 2, 5 and 6 have been canceled. All of the remaining claims have been amended to define the invention more clearly.

The Examiner objected to the drawings under 37 CFR 1.83(a) because the drawings did not show waterproof ribs projecting from a front surface of the rubber plug as set forth in the claims.

The amended claims no longer recite the waterproof rib on the rubber plug.

The Examiner objected to the specification and required a new title that clearly identifies the invention.

The title of the invention has been amended.

The Examiner objected to claims 6 and 10 in view of spelling errors.

Claim 6 has been canceled and claim 10 has been amended.

Claims 1, 2 and 8 were rejected under 35 USC 112, first paragraph because the specification did not have support for a waterproof rib projecting from the rubber plug. As noted above, the claims have been amended and no longer recite a waterproof rib on the rubber plug.

Claims 1, 5 and 7-9 were rejected under 35 USC 102(b) as being anticipated by Gehrke et al., U.S. Patent No. 6,095,860. The Examiner referred to the element 3 on the rear surface of the connector housing.

The Gehrke et al. connector shows a connector housing with an inner collar that nests into recesses between an inner region 9 and an outer rim 8 of a seal 5.

The recess between the inner region 9 and the outer rim 8 appears to be dimensioned so that the inner surfaces of the outer rim 8 are in surface contact with outer portions of the inner collar 3. Additionally, the distal end of the inner collar 3 appears to merely abut against the opposed face of the seal 5. With this design, dimensional changes in the housing that could occur when the housing is large will cause gaps between the seal 5 and the housing. This is precisely the problem identified in the subject application.

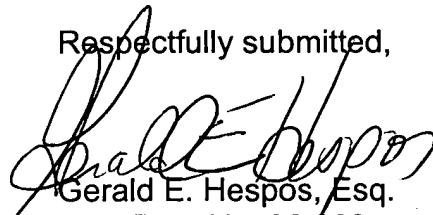
In contrast to the Gehrke et al. teaching, the connector of the subject invention has a rubber plug with front and rear surfaces that are substantially planar in an unbiased condition of the rubber plug. The waterproof rib then is pressed against at least one of those planar surfaces and biases the seal into a nonplanar shape. Thus, sealing can be achieved entirely around the cavities in the housing even if there are dimensional stability problems relating to walls that extend substantially along the connecting direction defined by the cavities in the housing. The simple nested engagement of Gehrke et al. does not provide this high quality sealing. Furthermore, there is nothing in the Gehrke et al. reference that would motivate the skill artisan to make the significant revisions to Gehrke et al. that would be required to bring the Gehrke connector closer to the claimed invention. Accordingly, it is submitted that the invention defined by amended claims 1 and 7-9 is not taught or suggested by Gehrke et al.

Claims 2-4, 6 and 10 were rejected under 35 USC 103(a) as being obvious over Gehrke et al. in view of Maejima et al., U.S. Patent No. 5,145,410. The Examiner concluded that Maejima shows a plurality of waterproof ribs.

The Maejima et al. reference suffers from exactly the same deficiencies as Gehrke et al. In particular, the Maejima et al. reference shows a seal with very complex front and rear surfaces defined by an array of grooves. The grooves are intended to nest with corresponding ribs on the housing. There is no suggestion of providing a rubber plug with front and rear faces that are substantially planar in an unbiased condition of the rubber plug for use with a housing or rubber plug hold down member that has a waterproof rib. In fact, the embodiment of Maejima et al. that shows a planar face on the rubber plug (FIG. 6) is used with a housing that also has a planar face. Accordingly, it is submitted that the invention defined by the amended claims herein is not taught or suggested by the hypothetical combination of Gehrke et al. and Maejima et al.

In view of the preceding amendments and remarks, it is submitted that the amended claims remaining in the application are directed to patentable subject matter and allowance is solicited. The Examiner is urged to contact applicant's attorney at the number below to expedite the prosecution of this application.

Respectfully submitted,



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